

REMARKS

Claims 1-13 are pending in this application. Claims 1-13 stand rejected. By this Amendment, claims 1 and 12 have been amended and new claims 14-17 have been added. No new matter has been added. The amendments do not alter the scope of these claims, nor have these amendments been made to define over the prior art. Rather, the amendments to the claims have been made to improve the form thereof. In light of the amendments and remarks set forth below, Applicant respectfully submits that each of the pending claims is in immediate condition for allowance.

The Examiner has objected to Figures 6 and 7. Figures 6 and 7 have been labeled as prior art. As such, Applicants request withdrawal of the objection.

The Examiner has objected to claim 12 as being dependent from claim 1 when it should properly depend from claim 11. Claim 12 has been amended. Accordingly, Applicants request reconsideration and withdrawal of the rejection.

Claims 1, 4, and 13 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,708,801 ("Williams"). Applicants request reconsideration and withdrawal of the rejection.

Among the limitations of independent claim 1 and corresponding method claim 13 not present in Williams is the relationship between the first and second clock inputs. As recited in the claims, the second clock is different from the first clock and whose clock frequency is relatively prime with respect to the first clock.

The Office Action asserts that this feature is disclosed in Williams at column 2, lines 58-59. We respectfully disagree. The cited portion of Williams discloses that the chip clock to bus clock frequencies are 2:1, 3:2, 4:3 and the like. The Examiner then states that when the clock frequencies are chosen as 3 MHz and 4 MHz, there is no common divisor. However, this is incorrect. While the numerals "4" and "3" do not

have a common divisor, 3 MHz and 4 MHz have a common divisor such as 6 resulting in 500 KHz. As such, the explicitly recited limitation of no common divisor is not disclosed nor is it inherent in Williams.

Applicants note that the amendment to claim 1 was necessitated by a translation error and that claim 1 attached to the International Preliminary Examination Report actually reads "which is different from the first clock." Therefore, Applicants have amended claim 1 to be consistent with the wording of claim 13. Additionally, Applicants note that the term "relatively prime" should not be interpreted in the narrow mathematical sense but in light of the specification of the present application. In accordance with the present application, the term "whose clock frequency is relatively prime with respect to first clock" should be interpreted as "whose clock frequency is, irrespective of the unit used for representing the clock frequencies for the first and second clocks, relatively prime to the first clock." According to the present specification, the relationship between the first and second clock is not restricted to rational ratios but also comprises irrational ratios which is not representable by a ratio between integers. Therefore, new dependent claim 14 adds this definition to the pending claims.

Claim 3 stands rejected under 35 U.S.C. § 103(a) as being unpatenable over Williams in view of U.S. Patent No. 6,470,393 ("Heinrich") and further in view of EP 0569131 ("Yamaguchi"); claims 5-8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Williams in view of Heinrich; and claims 9-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Williams in view of Applicant's admitted prior art. We respectfully disagree with these rejections.

The Examiner recognized that Williams fails to disclose a controllable oscillator. In an effort to cure this deficiency, the Examiner utilizes Heinrich. However, we submit Heinrich fails to cure the deficiencies in Williams and that the Examiner has not set forth a motivation to combine the teachings of Heinrich with Williams.

Williams does not disclose a controllable oscillator as recited in the claims. As noted in the Office Action, Heinrich varies the clock frequency of the bus to account for variations in frame length. In an effort to cure this deficiency, the Examiner includes Heinrich which discloses a phase-lock loop by which the oscillator is tuned to a nominal comparison value between an actual frame length and a nominal frame length. The phase lock loop outputs a clock signal used for the entire system. However, there is no suggestion to clock a peripheral unit with a controllable clock. Heinrich merely teaches a single oscillator which is used to clock an entire system but, due to inconsistencies in frame length or partial frame lengths, can be varied by adjusting the oscillator to account for the varying frame length. This is unlike the use of two distinct clocks, one for a CPU and a second clock for a peripheral unit. Therefore, the combination of Williams and Heinrich fails. As such, the clock signal in Heinrich is similar to the bus clock in Williams.

Additionally, we note that the Examiner has failed to set forth a proper motivation to combine the Williams and Heinrich references. The Examiner asserts that it would have been obvious to have a controllable oscillator within the clock generator of Williams since it provides the flexibility to have desired frequency for the bus. However, we note that the variable frequency is applied to the peripheral unit not to the bus. Neither Williams nor Heinrich discloses applying a variable frequency to the peripheral unit nor does either reference suggest using a variable oscillator for the peripheral units. Therefore, neither reference provides a motivation to combine the teachings to arrive at Applicants' explicitly recited invention.

Applicants have responded to all of the rejections and objections recited in the Office Action. Reconsideration and a Notice of Allowance for all of the pending claims are therefore respectfully requested.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

If the Examiner believes an interview would be of assistance, the Examiner is welcome to contact the undersigned at the number listed below.

Dated: August 15, 2006

Respectfully submitted,

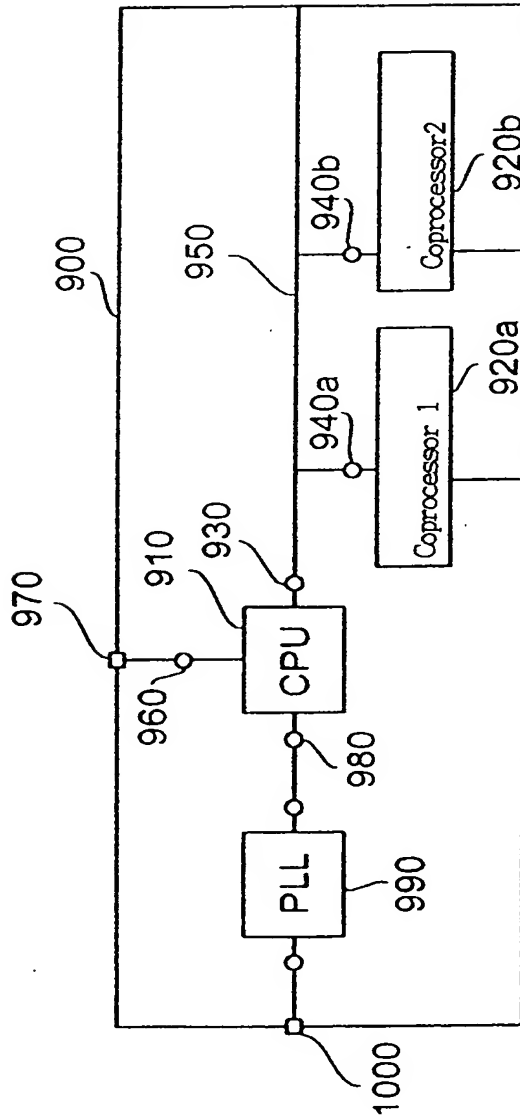
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Attached: Figures 6 and 7



PRIOR ART

FIG 6

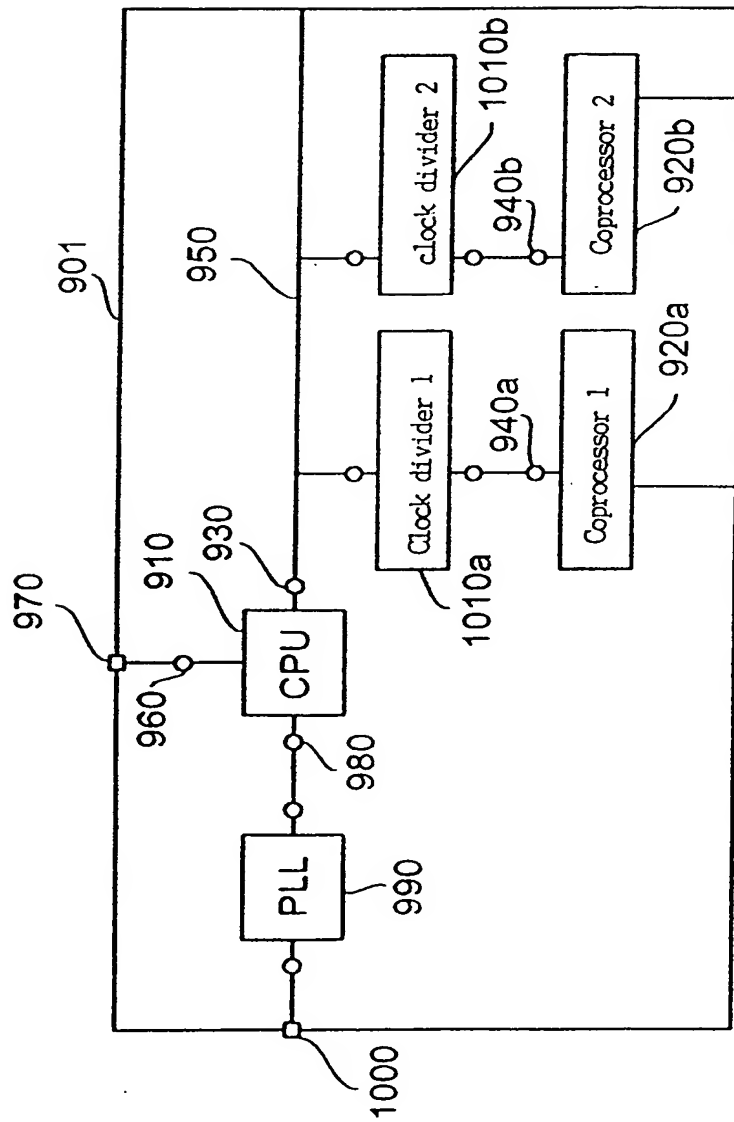


FIG 7

PRIOR ART